CHRONIC KIDNEY DISEASE GUIDELINE
STAGE 3

Your patient, _____, has an estimated Glomerular Filtration Rate (GFR) of _____ ml/min/1.73m^2 (i.e., Normal > 90) which was calculated by using the modified MDRD equation. This may indicate Stage 3 kidney disease as defined by the KDOQI guidelines developed by the National Kidney Foundation.

If this patient already has been identified as having chronic kidney disease of known cause, please proceed to the GOALS OF TREATMENT section below. If the patient does not have known CKD, you should consider the following FURTHER EVALUATION of your patient at their next visit.

1. Repeat a serum creatinine and estimated GFR in 1-2 weeks to see if kidney failure is acute
2. Check for symptoms of urinary tract disease
3. Check blood pressure and for a history of hypertension
4. Check urinalysis for protein or blood.
5. Obtain a spot urine for protein/creatinine ratio.
6. Check whether patient is on a nephrotoxic medication, particularly NSAIDS, including cox 2 inhibitors.

An attempt should be made to identify the cause of the patient's CKD. Most CKD is due to either hypertension or diabetes diagnoses which often can be made on clinical grounds. Additional studies that should be considered are Hemoglobin A1c and ultrasound of the kidneys to rule out obstruction.

Consider REFERRAL to a subspecialist if any of the following are found:

Unexplained proteinuria (>1gm/day) or microalbumen/creatinine ratio >250mg/gCr
Unexplained microscopic or macroscopic hematuria
Diabetic with macroalbuminuria (>250mg/gCr)
Recurrent kidney stones (>1 episode)
Rapidly deteriorating kidney function
Difficult to control hypertension (see below)

GOALS OF TREATMENT

ASSESS PROGRESSION OF CKD
Measure serum creatinine, estimated GFR and urinary microalb/creatinine ratio every 3 months.

BLOOD PRESSURE < 130/80 or <125/75 (if proteinuria >1gm/d or U_{prot}/U_{creat} >1).
Preferred agents are angiotensin converting enzyme (ACE) inhibitors [or angiotensin receptor blockers (ARB)] and thiazide diuretics. Additional medications may be needed. Kidney function should be rechecked 14 days after starting an ACE inhibitor. Up to a 30% increase in creatinine may be seen initially and is acceptable. If this is exceeded, REFERRAL to a nephrologists is recommended.

ANEMIA
Check hemoglobin twice a year. If this is <11gm/dl, check for occult blood loss and iron deficiency and treat if found. In iron replete patients with persistent anemia, consider erythropoeitic therapy.

CARDIOVASCULAR DISEASE
Patients with CKD or microalbuminuria are at increased risk of cardiovascular events. They are a target for risk factor intervention (i.e., LDL<100, weight loss, proper diet, exercise, smoking cessation).

PATIENT EDUCATION
Patient education materials and patient education classes on living with kidney disease can be obtained from The National Kidney Foundation of Western New York (Tel: 716-835-1323). Patient education classes are highly recommended for all Stage 3-5 Kidney disease patients and are a covered benefit of most

Western New York health insurers.